REMARKS

In the Office Action mailed September 21, 2004, all of claims 1-19 stand rejected. Claims 1 and 13-19 have been amended. As a result, claims 1-19 remain pending in the present application (3 independent claims, 19 claims total). No new matter has been added by this Amendment. Reconsideration is respectfully requested in light of the following Remarks.

I. Objections and Informalities

The subject Office Action requires new drawings in compliance with 37 CFR 1.121. Such drawings are included herewith. The subject Office Action notes that the claims as filed omitted a claim 11. Applicants have noted the renumbering of claims 12-20 as claims 11-19 as set forth in the Office Action. Applicants submit that by virtue of this Response, the foregoing have been addressed.

Additionally, Applicant has reviewed claim 13 to address the suggestion that "U" replace "I" stating that the formula recited uses "U". However, Applicants fail to see where "U" is used in the claim and respectfully request clarification of the suggestion.

II. Claim Rejections -- 35 U.S.C. § 103

In the subject Office Action, claims 1, 4-6 and 18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Sundberg (U.S. Patent No. 6,141,496) in view of Kelly (U.S. Patent No. 6,254,011). In particular, the Office Action states that Sundberg discloses a heating element, a voltage source, a variable resistor including a fixed resistive element and moveable element and a dissipated power that is related to the position of the moveable element. The Office Action continues stating that though Sundberg does not teach a non-linear variable resistor, Kelly discloses using a non-linear variable resistor to compensate for non-linearities in a heating system. The Office Action thus concludes that it would have been obvious in view of Kelly to

make the variable resistor of Sundberg non-linear to compensate for non-linearities in the heating system of Sundberg.

Applicants respectfully traverse. First, while Sundberg relates generally to air freshening devices, Kelly relates to the non-analgous art of heating a vehicle operator cab (e.g., a tractor). While Kelly does appear to disclose a non-linear rotational potentiometer which is used to activate a physical valve to open at an unequal rate, providing an unequal flow of a heated fluid through a heat exchanger, which in turn provides a linear heat output rate into the cab of the vehicle. This disclosure is significantly different than the present invention.

As presently recited in amended claims 1 and 13, the present invention is used in connection with "vapor delivery system[s] for dispensing a vaporized material[s]." Clearly, the vapor delivery systems (e.g., air fresheners) are significantly different arts (e.g., varying significantly in scale) than the systems used to control complicated fluid heat exchanger systems for heating vehicle cabs. Moreover, amended claim 1 recites:

> a variable resistor coupled to said heating element and said voltage source, said variable resistor including a fixed resistive element and a moveable element, said moveable element having a position and adjustably contacting said fixed resistive element at a contact point associated with said position
>
> and
>
> said heating element having a dissipated power that is at least partially linearly related to said position, said dissipated power at least partially linearly related to a temperature of said heating element.

Similarly, amended claim 13 recites:

> wherein the dissipated power *PH* is related to *RS*(x) by the equation:

$$P_H = C_1\left(\frac{1}{R_S^2 + C_2 R_S + C_3}\right)$$

where $C_1 = V^2 R_H$, $C_2 = 2R_H$, and $C3 = {R_H}^2$;

said dissipated power linearly related to a temperature of said heating element;

and wherein RS(x) is a non-linear function and PH(x) is at least partially linear.

The variable resistor is coupled to the heating element and the heating element's power is, at least in part, linearly related to the temperature of the heating element itself, not through a series of mechanical (fluid heat exchangers, ball valves, etc.) components.

With regard to amended claim 18, there is no disclosure whatsoever of any relationship between "a heating element configured to produce a dissipated power, said evaporation rate being a function of said dissipated power." In fact, none of the references cited in the Office Action even disclose an understanding of evaporation rate let alone an understanding of using a non-linear resistive element to effect a linear evaporation rate.

Accordingly, Applicants submit the combination of Sundberg and Kelly is improper, and moreover, even when combined, fail to disclose, suggest, or teach each an every element of either amended claims 1, 13 or 18. Applicants therefore respectfully request that the Section 103 rejections be withdrawn.

Additionally, as claims 4-6 variously depend from amended and allowable claim 1, Applicants submit that claims 4-6 are likewise allowable and respectfully request the rejections to these claims be withdrawn as well.

In the subject Office Action, claims 2, 3, 7, 8 and 19 also stand rejected under Sundberg in view of Kelly as applied claims 1, 4-6 and 19 and further in view of Fujii (U.S. Patent No. 3,564,475). The Office Action states that it would have been obvious in view of Fujii to make the resistive element a thin film and that varying the thickness of the thin film of Fujii to create a non-linear resistive element renders the aforementioned claims obvious. Applicants traverse.

First, as noted above, Applicants submit the combination of Sundberg and Kelly is improper and nevertheless, does not teach each and every element of the amended claims and reiterates the arguments set forth above. Moreover, Fujii makes no disclosure of the relationship of linearly relating a "heating element having a dissipated power" to the actual "temperature of said heating element." Thus, even when combining Sundberg, Kelly and Fujii, the combination fails to disclose, suggest, or teach each an every element of claims 2, 3, 7, 8 and 19. Applicants therefore respectfully request that the Section 103 rejections be withdrawn.

Finally claims 9, 10 and 11-17 stand rejected under Sundberg in view of Kelly and Fujii as applied claims 2, 3, 7, 8 and 19 and further in view of Ginn (U.S. Patent No. 4,435,691) to use first and second resistive elements to create non-linear outputs and create high, low and intermediate settings. Applicants traverse.

Again, as noted above, Applicants submit the combination of Sundberg and Kelly is improper and nevertheless, does not teach each and every element of the amended claims and reiterates the arguments set forth above. Moreover, like Fujii, Ginn makes no disclosure of the relationship of linearly relating a "heating element having a dissipated power" to the actual "temperature of said heating element." Thus, even when combining Sundberg, Kelly, Fujii and now Ginn, the combination fails to disclose, suggest, or teach each an every element of claims 9, 10 and 11-17. Applicants therefore respectfully request that the Section 103 rejections be withdrawn.

CONCLUSION

In view of the above remarks, Applicants respectfully submitted that the foregoing remarks fully address the objections and rejections of the subject Office Action, and that all of the pending claims comply are patentable over the art of record, and are in condition for allowance.

Accordingly, a Notice of Allowance respecting all pending claims is earnestly solicited. Should the Examiner wish to discuss any of the above in greater detail, then the Examiner is invited to telephone the undersigned at the Examiner's convenience.

Accordingly, Applicants respectfully request reconsideration and allowance of all pending claims. The Examiner is invited to telephone the undersigned at (602) 382-6337 at the Examiner's convenience, if that would help further prosecution of the subject Application. Applicants authorize and respectfully request that any fees due be charged to Deposit Account No. 19-2814. **This statement does NOT authorize charge of the issue fee**.

Respectfully submitted,

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By: _____
Damon L. Boyd
Reg. No. 44,552

SNELL & WILMER L.L.P.
One Arizona Center
400 East Van Buren
Phoenix, Arizona 85004-2202
(602) 382-6337